exhibited in "The Principles of Water-works Engineering," the practical engineer will obtain fuller information, with less trouble, from the more clearly arranged and better illustrated pages of "The Water Supply of Towns."

HAMILTON'S PATHOLOGY.

A Text-book of Pathology, Systematic and Practical. By D. J. Hamilton, M.B., F.R.C.S.E., F.R.S.E., Professor of Pathology, University of Aberdeen. Vol. ii. Parts 1 and 2. (London: Macmillan and Co., 1894.)

THESE two handsome volumes complete the laborious task which Prof. Hamilton set himself many years ago, of producing a text-book of pathology, which should include not merely morbid anatomy and histology, but should deal also with clinical medicine, and those new but rapidly developing sciences, pathological chemistry, pathological physiology, and bacteriology.

It is true that the many varied problems which come before a pathologist require for their solution a more or less extensive acquaintance with each and all of these branches. So many, however, are the workers, and so vast has the literature become in each branch, that it is already impossible for anyone to be equally proficient in all, and it is necessary to specialise.

If this is the case with the individual, it is much more so with the text-book. It is impossible to compress within even 1800 pages, a tithe of our present knowledge of all these branches, and opinions will differ widely as to how the selection should be made.

The task of making such a selection is herculean enough to daunt any man, and the thanks of all interested in pathology are due to the Professor for the very valuable addition he has made to our literature on the subject. The amount of original work is considerable, and the volumes are copiously illustrated by drawings, the majority of which are by the author.

An extremely useful feature in the book consists in the bibliography of both the English and foreign literature at the end of each section. The convenient system is also adopted of indicating the title of any publication referred to in the text by a number in Roman letters, while the full titles and the corresponding numbers are given in a list at the end of the book. The first volume, which was reviewed in these columns in 1889, met with general appreciation. This volume commenced with full directions for making systematic post-mortem inspections, and for the practical bacteriology and histology of the tissues removed. Nearly 200 pages were devoted to a full account of inflammation and suppuration, and of tumours and new formations, while the remainder of the book was occupied by an account of the heart, the blood, and the vascular system generally.

The two parts of the second volume now issued are bound up separately. The first part of the present volume is devoted to a systematic account of the pathology of the respiratory organs, the liver and the kidney; a good solid piece of work containing much original research, in which are embodied the well-known papers of the author on diseases of the lungs, and on cirrhosis of the liver. Among the many observations, we would draw attention to the important conclusion that in nephritis the fatty granular remains of the convoluted epithelium are absorbed by the lymphatic system, and are not, as is generally supposed, mainly washed out by the urine.

The drawings, illustrating the author's views, are worthy of all praise; they are well executed, and are sufficiently diagrammatic to impress the conclusion to be indicated, while their reproduction also reflects great credit on the publishers.

The remainder of the volume deals with the diseases of the digestive, the nervous, the osseous and the cutaneous systems, finishing with a short statement of the various malformations, and a good summary of systematic bacteriology and of human parasites.

The present volume is overweighted by 150 pages of normal anatomy and physiology, which preface the accounts of the various organs, nearly fifty pages and twenty illustrations being devoted to the nervous system. This material is surely out of place in a book, in which the author has been compelled by the exigencies of space and time to reduce his account of the pathology of many conditions to too brief an account to be of value, so that often there is no indication as to which lesions and causes are common and important to remember, and which are exceptional; frequently a mere list of them is given.

It is also to be regretted that it has been thought desirable to devote valuable space to the description of the various tests for sugar and albumen in the urine, as this information is contained in the ordinary standard books on clinical medicine.

The author apologises for the lapse of five years since the appearance of the first volume; and we cannot help regretting that Prof. Hamilton did not publish only the first part of the present volume, and allow himself another year or more in which to have worked up the second part to the high standard reached in the earlier portion of the book. Although five years may appear a long time, for the production of the second volume of this book, still the amount of labour required was so extreme that more time was really necessary. The lack of space also has necessitated so much compression, that often the pathology is reduced to a mere explanation of the terms used; while the numerous omissions of important facts suggest that this part has been produced at very high pressure, so that the facts are not presented in their due relation to one another, while there are several statements to which we would take exception.

While such common causes of optic neuritis as plumbism and anæmia are omitted, excessively rare ones, such as pneumonia and measles, are given; again, while optic neuritis is discussed, optic atrophy is omitted. Among the causes of cerebral hæmorrhage, such well-recognised ones as glioma and aneurysm are omitted.

Through oversight the following conflicting statements have been allowed to appear. Under cysts of the liver, the association of such with similar ones in the kidney is said to be fortuitous; while under the head of renal diseases, it is noted that out of sixty-two cases of cystic kidneys, seventeen were associated with similar cysts in the liver. On one page, in discussing the growth of typhoid bacilli, great doubt is thrown on whether they spore; on the next page, it is stated that they invariably spore when grown under suitable conditions.

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The excellence of the work, and it is great, lies in the histological and bacteriological portions, and in the numerous and ingenious theories and suggestions; but the necessity of finishing the book soon, and of keeping it within reasonable size, appear to be responsible for the less satisfactory accounts of the morbid anatomy and of the etiology of the lesions in certain of the sections. This, however, will probably be remedied in later editions.

OUR BOOK SHELF.

The Mechanism of Weaving. By T. W. Fox. Pp. 464. (London: Macmillan and Co., 1894.)

ONE result of the application of the "beer money" to education is the increasing production of technical handbooks similar to that before us. Technical Instruction Committees found, very soon after their responsibilities were thrust upon them, that there were few competent teachers of technology, and that the literature of arts and crafts was very limited. Many books have been made for the purpose of supplying the need, some good and others of doubtful utility. The new conditions have been favourable to the development of technological books and teachers, and we must not complain if a few monstrosities occur in the case of each, for they are more than counterbalanced by many admirable examples on the other side. The book under review is one of these new guides to industries, and nothing but good can be said of it. It deals with a branch of weaving that has been almost ignored by previous writers. Much has been written on designing and fabric structure, but practically nothing on the mechanical processes of the weaving trade, though new machinery and new processes have been increasing ever since the power-loom supplanted the hand-loom. This gap is admirably filled by Mr. Fox's treatise. The leading types of weaving machinery are clearly described, and the numerous illustrations (256 in all) of machines, appliances, and constructions pertaining to the textile industry are most instructive. We have no hesitation in saying that Mr. Fox, who is the lecturer on textile fabrics at the excellent Municipal School at Manchester, has produced a practical handbook of great value.

Memorials of Old Whitby. By Rev. J. C. Atkinson, D.C.L. Pp. 326. (London: Macmillan and Co., 1894.)

FICTION, "like the baseless fabric of a vision, leaves not a wrack behind," because it has no foundation in fact. Stories that are commonly classified as "fabulous" usually have, however, a nucleus of scientific import. In the words of Canon Atkinson: "The myth, the fable (of the mystic sort), the legend, has always a base, a substratum or foundation of some sort. Like the Pentacle, with its mystic application and use, or the Svastika, Fylfot, or Hammer of Thor, the Monolith or Standing-stone—from Jacob's stone at Bethel, and before and since—it has always had its own something to rest upon, to spring from its actual material 'base' or occasion." Scientific inquiry is required to reveal this base; but by this we do not mean that facts of physical or of natural science are necessarily involved in every marvellous story, but rather that the investigator of legendary lore should conduct his research in a scientific spirit, discarding speculative evidence, and reducing the problem to its simplest appearance. This is the spirit in which Canon Atkinson has investigated the myths, legends, and traditions connected with Whitby. His treatment of the Caedmon legend is worthy of special mention. It will be remembered that Caedmon produced his great sacred poem at Whitby. According to Baeda, he was a common cowherd or oxherd, to whom the gift of poesy was miraculously, or at least suddenly, given, and this story has been generally accepted in spite of its great improbability. Canon Atkinson rids the story of its miraculous element, and justifies the dictum *poeta nascitur, non fit.* He shows that it is largely mythical, and that Caedmon was probably a homely native poet of some genius, but undeveloped, before the Abbess Hild took him up. This view is practically clinched by the evidence that Caedmon's name is of Celtic origin, and that therefore he doubtless possessed the fervid imagination and vivid fancy of the Celtic temperament. It need hardly be said that the miracle described by Baeda would have been eliminated from the story at once by a man of science. To us it seems that Canon Atkinson comes to the only conclusion possible after a careful consideration of historical records, and a common-sense view of the case. Other stories and customs connected with Whitby are discussed with a similar broad-mindedness, and in a manner which local historians generally would do well to follow.

Die Schöpfung der Tierwelt. Von Dr. Wilhelm Haacke. Pp. 552. (Leipzig and Vienna: Bibliographisches Institut, 1893.)

IT is just as well to state at once that this is a scientifically-arranged description of the animal kingdom, profusely and beautifully illustrated with twenty coloured plates and 469 figures in the text. The illustrations are certainly among the finest of their class, and one cannot help regretting that, as the text is in German, the work can only have a limited sale in England. We can console ourselves, however, with Mr. Lydekker's "Royal Natural History," now being published, and which is rather more popular than the volume under review. The order in which Dr. Haacke treats his subject is uncommon. The book is divided into two parts, one dealing with the various forms of animal life from the point of view of their development, while in the second part the characteristics of different groups of animals are described. The first part is thus chiefly concerned with embryology and palæontology in their relations to zoological affinities; with the functions of organs and the influence of environment; and with the distribution of animal life upon the earth. In the second part, invertebrated and vertebrated animals occupy two separate sections, and life is traced from the protozoa up to the higher forms. From this brief sketch it will be seen that the book has the theory of evolution as the basis of its construction. It is therefore a work in which the facts of natural science are presented in scientific order, and as such deserves high commendation.

The Vaccination Question. By Arthur Wollaston Hutton, M.A. Pp. 128. (London: Methuen and Co., 1894.)

MR. HUTTON is among the mistaken people who distrust vaccination, and advocate the repeal of the compulsory laws relating to it. His book is in the form of a letter addressed to Mr. Asquith, in the hope of converting him to the opinion that compulsory vaccination is indedefensible. It would be futile for us to discuss the subject, or to attempt to show the fallacy of much of the evidence adduced against vaccination. We may, however, point out that, to be consistent, the anti-vaccinationists must oppose the treatment of diphtheria by anti-toxic serumt; but this they are doubtless ready to do.

Dr. William Smellie and his Contemporaries. By John Glaister, M.D. Pp. 360. (Glasgow: James Maclehose and Sons, 1894.)

DR. GLAISTER'S book throws some new light upon the history of obstetrics in Great Britain and France, during the eighteenth century, in addition to tracing the career of one of the founders of scientific midwifery.

Smellie's work, however, was so purely medical in character, that a review of it would be of little interest to most of the readers of NATURE.

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